PTO/SB/21 (09-04)
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/801,273
Filing Date	March 16, 2004
First Named Inventor	Jaime Garcia et al.
Art Unit	3724
Examiner Name	E. Landrum
Attorney Docket Number	JK-01488A

Total Number of Pages in This Submission: 24

ENCLOSURES *(check all that apply)*

- ☒ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment / Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
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- ☒ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) *(please identify below)*:
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm	Black & Decker Inc.		
Signature			
Printed Name	Adan Ayala, Esq.		
Date	January 8, 2007	Reg. No.	38,373

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature			
Typed or printed name	Adan Ayala, Esq.	Date	January 8, 2007

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL for FY 2006

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($) 500

Complete if Known	
Application Number	10/801,273
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METHOD OF PAYMENT (check all that apply)

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
		Small Entity		Small Entity		Small Entity	
Application Type	Fee ($)	Fee($)	Fee($)	Fee($)	Fee($)	Fee($)	Fees Paid ($)
Utility	300	150	500	250	200	100	____
Design	200	100	100	50	130	65	____
Plant	200	100	300	150	160	80	____
Reissue	300	150	500	250	600	300	____
Provisional	200	100	0	0	0	0	____

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims		Extra Claims		Fee($)		Fee Paid ($)
____	-20 or HP=	____	x	____	=	____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims		Extra Claims		Fee($)		Fee Paid ($)
____	- 3 or HP=	____	x	____	=	____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims	
Fee ($)	Fee Paid ($)
____	____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets		Extra Sheets		Number of each additional 50 or fraction thereof		Fee ($)		Fee Paid ($)
____	- 100 =	____	/ 50 =	____	(round up to a whole number) x	____	=	____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	____
Other (e.g., late filing surcharge) : Appeal Brief	500

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 38,373	Telephone 410-716-2368
Name (Print/Type)	Adan Ayala, Esq.		Date January 8, 2007

UTILITY PATENT B&D No. JK01488A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: **Jaime GARCIA et al.**

Serial No.: **10/801,273** Examiner: **E. Landrum**

Filed: **March 16, 2004** Group Art Unit: **3724**

For: **GREATER CAPACITY CUTTING SAW**

Assistant Commissioner for Patents
Washington, DC 20231

APPEAL BRIEF

I, Adan Ayala, Reg. No. 38,373, certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 1-8-07

Adan Ayala

Dear Sir:

I. INTRODUCTION

A final Office Action was mailed on August 25, 2006. In response to such Action, a Notice of Appeal was mailed on November 21, 2006, for the above-identified application. The present appeal brief is being timely filed as required under 37 CFR § 41.37.

II. REAL PARTY IN INTEREST

The real party in interest in the present case is Black & Decker Inc. An assignment transferring all rights to the present application and resulting patents can be found at Reel 017006, Frame 0374.

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III. RELATED APPEALS AND INTERFERENCES

No other appeals or interferences related to the present case are currently pending.

IV. STATUS OF CLAIMS

Claims 1-7 and 17-30 are currently pending and have been rejected in the present application. Claims 8-16 and 31-33 have been canceled.

Claims 1-7 and 17-30 are presently appealed.

V. STATUS OF AMENDMENTS

No amendments have been filed subsequent to final rejection.

VI. SUMMARY OF CLAIMED SUBJECT MATTER

Pursuant to 37 CFR § 41.37 and MPEP § 1206, Applicants/appellant hereby provide a concise explanation of the inventions defined in the claims involved in the present appeal.

This explanation refers to the specification by page and line number and to the drawings, as required by the CFR and the MPEP rules. However, the following explanation only refers to the embodiments disclosed in the specification and does not discuss alternative mechanisms that would be covered by the claims. Accordingly, the following explanation should not be used to limit the scope of the claims.

Independent Claim 1 calls for a miter saw 100, comprising a base 104 having a support surface 106 for at least partially supporting a workpiece. Spec., p. 4, lns. 22-23. The miter saw

100 also has a workpiece positioning fence 112 coupled to the base 104. See Spec., p. 4, lns. 23-25. The positioning fence 112 is orientated substantially perpendicular to the support surface 106. Spec., p. 5, lns. 2-3. A cutting assembly 102 is pivotally mounted on the miter saw 100 to achieve a plurality of positions. Spec., p. 5, lns. 10-11.

The cutting assembly 102 includes a motor orientated substantially perpendicular to an arbor 648 for rotating a circular saw blade 110 (spec., p. 6, ln. 24 to p. 7, ln. 1), and a gear assembly 652 configured and arranged to transfer the rotational energy of the motor to the arbor 648 (spec., p. 7, lns. 11-17). The gear assembly 652 and motor are configured so as to not contact the workpiece position fence112 when the cutting assembly 102 is disposed at the cutting assembly's closest position to the base 104 when mitering at least a 45° (forty-five degree) from a plane substantially perpendicular to the workpiece positioning fence 112. Spec., p. 7, lns. 24-28.

Claim 2 is dependent upon Claim 1 and thus includes the elements of Claim 1. In addition, Claim 2 further requires that the gear assembly 652 include a helical gear set coupled to the motor and a bevel gear set between the helical gear set and the arbor 648. Spec., p. 7, lns. 12-18.

Claim 3 is dependent upon Claim 1 and thus includes the elements of Claim 1. In addition, Claim 3 further requires that the gear assembly 652 include a helical gear set coupled to the motor and a jack shaft 658 extending between the helical gear set and a bevel gear set coupled to the arbor 648. Spec., p. 7, lns. 12-18.

Claim 4 is dependent upon Claim 1 and thus includes the elements of Claim 1. In addition, Claim 4 further requires a gear box 644 for enclosing the gear assembly, which is tapered in the direction of the base 104. Spec., p. 7, lns. 11-12 and 24-28.

Claim 5 is dependent upon Claim 1 and thus includes the elements of Claim 1. In addition, Claim 5 further requires a trunnion 118 disposed between the cutting assembly 102 and the base 104, where the trunnion is constructed so as to permit the cutting assembly 102 to bevel with respect to the base 104. See Spec., p. 5, lns. 24-25.

Claim 6 is dependent upon Claim 1 and thus includes the elements of Claim 1. In addition, Claim 6 further requires that a turntable 108 be pivotally mounted to the base 104 so that it can rotate the cutting assembly 102 with respect to the workpiece positioning fence 112. See Spec., p. 4, lns. 23-27.

Claim 7 is dependent upon Claim 1 and thus includes the elements of Claim 1. In addition, Claim 7 further requires that the miter saw 100 is at least one of a chop-type miter saw and a sliding miter saw. Spec., p. 4, lns. 15-18 and 21-22.

Independent Claim 17 calls for a saw 100 comprising a base 104 having a support surface 106 for at least partially supporting a workpiece. Spec., p. 4, lns. 22-23. The saw 100 also has a workpiece positioning fence 112 coupled to the base 104. See Spec., p. 4, lns. 23-25. The positioning fence 112 is orientated substantially perpendicular to the support surface 106. Spec., p. 5, lns. 2-3. A cutting assembly 102 is pivotally mounted on the saw 100 to achieve a plurality of positions. Spec., p. 5, lns. 10-11.

The cutting assembly 102 includes a motor orientated substantially perpendicular to an arbor 648 for rotating a circular saw blade 110 (spec., p. 6, ln. 24 to p. 7, ln. 1), and a jack shaft 658 having a first end with a helical gear 656 and a second end having a bevel gear 622 (spec., p. 7, lns. 12-18). The jack shaft 658 is configured to transfer the rotational energy from the motor to the arbor 648. See Spec., p. 7, lns. 12-18. The arbor 648 includes a bevel gear 664 for

mechanically coupling with the bevel gear 622 included on the jack shaft 658. Spec., p. 7, lns. 15-16.

Claim 18 is dependent upon Claim 17 and thus includes the elements of Claim 17. In addition, Claim 18 further requires that a turntable 108 be coupled to the base 104, so that it can adjust the angular orientation of the saw blade 110 with respect to a positioning fence 112. See Spec., p. 4, lns. 23-27.

Claim 19 is dependent upon Claim 17 and thus includes the elements of Claim 17. In addition, Claim 19 further requires that a trunnion 118 be disposed between the support 116 and the saw base 104 for beveling the saw blade 110 with respect to the support surface 106. Spec., p. 5, lns. 24-25.

Claim 20 is dependent upon Claim 17 and thus includes the elements of Claim 17. In addition, Claim 20 further requires that the cutting assembly pivot point is further away from the base 104 than the center of rotation of the saw blade 110 when the mounting arm 124 is parallel to the base 104. Spec., p. 5, lns. 19-22.

Claim 21 is dependent upon Claim 17 and thus includes the elements of Claim 17. In addition, Claim 21 further requires that the saw 100 be at least one of a chop saw, a chop-type miter saw, a sliding miter saw, and a beveling miter saw. Spec., p. 4, lns. 15-18 and 21-22.

Claim 22 is dependent upon Claim 17 and thus includes the elements of Claim 17. In addition, Claim 22 further requires a gear box 644 coupling the motor and the saw blade, wherein the gear box 644 is tapered in the direction of the base 104. Spec., p. 7, lns. 11-12 and 24-28.

Claim 23 is dependent upon Claim 22 and thus includes the elements of Claims 17 and 22. In addition, Claim 23 further requires a flange 668 for securing the circular saw blade 110 to

the arbor 648, wherein the gear box 644 terminates adjacent the flange 668. See Spec., p. 7, lns. 17-18 and FIG. 6.

Independent Claim 24 calls for a miter saw 100, comprising a base 104 having a support surface 106 for at least partially supporting a workpiece. Spec., p. 4, lns. 22-23. The miter saw 100 also has a workpiece positioning fence 112 coupled to the base 104. See Sepc., p. 4, lns. 23-25. The positioning fence 112 is orientated substantially perpendicular to the support surface 106. Spec., p. 5, lns 2-3. A turntable 108 is pivotally mounted to the base 104, so as to rotate with respect to the workpiece positioning fence 112. See Spec., p. 4, lns. 23-27.

In addition, a cutting assembly 102 is pivotally mounted to the turntable 108 so as to achieve a plurality of positions. Spec., p. 4, lns. 23-27. The cutting assembly includes a motor orientated substantially perpendicular to an arbor 648 for rotating a circular saw blade 110 (spec., p. 6, ln. 24 to p. 7, ln. 1), and a gear assembly 652 configured and arranged to transfer the rotational energy of the motor to the arbor 648 (spec., p. 7, lns. 11-17). The gear assembly 652 and motor are configured so as to not contact the workpiece position fence 112 when the cutting assembly 102 is disposed at the cutting assembly's closest position to the base 104 when mitering at 45° (forty-five degrees) from a plane substantially perpendicular to the workpiece positioning fence 112. Spec., p. 7, lns. 24-28

Claim 25 is dependent upon Claim 24 and thus includes the elements of Claim 24. In addition, Claim 25 further requires a trunnion 118 disposed between the cutting assembly 102 and the turntable 108, where the trunnion 118 is constructed so as to permit the cutting assembly 102 to bevel with respect to the base 104. See Spec., p. 5, lns. 24-25

Claim 26 is dependent upon Claim 24 and thus includes the elements of Claim 24. In

addition, Claim 26 further requires that the periphery of the saw blade 110 be substantially equal to the interface between the support surface 106 and the positioning fence 112, on the workpiece positioning side, when the cutting assembly 102 is disposed in a full-cut position. See FIG. 2.

Claim 27 is dependent upon Claim 24 and thus includes the elements of Claim 24. In addition, Claim 27 further requires the gear assembly 652 include a helical gear set coupled to the motor and a bevel gear set between the helical gear set and the arbor 648. Spec., p. 7, lns. 12-18.

Claim 28 is dependent upon Claim 24 and thus includes the elements of Claim 24. In addition, Claim 28 further requires the gear assembly 652 include a helical gear set coupled to the motor and a jack shaft 658 extending between the helical gear set and a bevel gear set coupled to the arbor 648. Spec., p. 7, lns. 12-18.

Claim 29 is dependent upon Claim 24 and thus includes the elements of Claim 24. In addition, Claim 29 further requires a gear box 644 for enclosing the gear assembly, which is tapered in the direction of the base 104. Spec., p. 7, lns. 11-12 and 24-28.

Claim 30 is dependent upon Claim 24 and thus includes the elements of Claim 24. In addition, Claim 30 further requires that the cutting assembly pivot point is further away from the base 104 than the center of rotation of the saw blade 110 when the mounting arm 124 is parallel to the base 104. Spec., p. 5, lns. 19-22.

VII. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether Claims 1, 4, 6-7, 24, 26 and 29-30 are unpatentable under 35 USC § 103(a) over US Patent No. 5,943,931 ("Stumpf") in view of US Patent No. 5,850,698 ("Hurn").

B. Whether Claims 2-3, 17-18, 20-22 and 27-28 are unpatentable under 35 USC § 103(a) over Stumpf in view of US Patent No. 3,611,859 ("Avakian").

C. Whether Claims 5, 19 and 25 are unpatentable under 35 USC § 103(a) over Stumpf in view of Avakian and further in view of US Patent No. 6,615,701 ("Hollinger").

D. Whether Claim 24 is being unpatentable under 35 USC § 103(a) over Stumpf in view of Avakian and further in view of US Patent No. 3,447,577 ("Burrows").

VIII. ARGUMENT

A. Claims 1, 4, 6-7, 24, 26 and 29-30 are Patentable under 35 USC § 103 over Stumpf in view of Hurn.

The Board should reverse the Examiner's improper final rejection of Claims 1, 4, 6-7, 24, 26 and 29-30 under 35 USC § 103 based on the combination of Stumpf and Hurn. This is because Hurn is not analogous prior art and no motivation exists to combine Stumpf and Hurn. Therefore, the Examiner's rejection was improper and should be reversed.

As admitted by the Examiner, Stumpf does not show all elements of independent Claims 1 and 24. In particular, Stumpf does not show (a) a gear assembly and (b) a motor orientated substantially perpendicular to an arbor called for in independent Claims 1 and 24. Instead, Stumpf discloses a motor 20 drivingly connected to the saw blade 16. Typically, where the motor is substantially distant from the saw blade, a belt is used to transfer the rotational energy of the motor to the arbor.

The Examiner relies on the teachings of Hurn to provide the gear assembly and the orientation of the motor. However, the Examiner has not met the *prima facie* case of obviousness for combining such references for several reasons.

First, Hurn is not analogous prior art, as it discloses a worm-drive circular saw, rather than a miter saw. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

Oetiker provides a good example of what can be considered analogous prior art in the mechanical arts, which include the present invention. In *Oetiker*, the applicant claimed an improvement in a hose clamp which differed from the prior art in the presence of a preassembly "hook" which maintained the preassembly condition of the clamp and disengaged automatically when the clamp was tightened. The Board relied upon a reference which disclosed a hook and eye fastener for use in garments, reasoning that all hooking problems are analogous. The CAFC held the reference was not within the field of applicant's endeavor, and was not reasonably pertinent to the particular problem with which the inventor was concerned because it had not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments.

In the present case, the particular problem with which the inventors were concerned was maximizing cutting capacity of the miter saw while maintaining the bevel angle range. Such problem is not the type of problem that a worm-drive circular saw would resolve. As stated in Hurn, the worm-drive circular saw is used in those applications where a longer housing is used to reach a workpiece. Hurn, col. 1, lns. 36-42. This is not a problem for miter saws since the user disposes the workpiece right on the miter saw. Thus a person of ordinary skill would not review the worm-drive circular saw field to find solutions to maximizing cutting capacity.

Furthermore, the Examiner has provided no evidence that a person of ordinary skill, seeking to solve a problem of maximizing cutting capacity while maintaining bevel angle range would reasonably be expected or motivated to look for a solution in the worm-drive circular saw field. Just like the PTO was not allowed to bring in hooks from the garment fastening field into the hose clamp fastening field, the Examiner should not be allowed to bring in transmissions and motor arrangements generators from worm-drive circular saw field into the miter saw field, especially where the Examiner has not provided any evidence that a person of ordinary skill would look in the worm-drive circular saw field. Applicants hereby request that the Examiner provide any evidence that persons skilled in the art would indeed act in such manner so that Applicants can fully prepare their argument in the event of an appeal to the Board is necessary.

Since Hurn cannot be combined with Stumpf, Claims 1 and 24 and their respective dependent claims are patentable.

Furthermore, even if Hurn was considered analogous prior art, the Examiner has failed to prove the *prima facie* obviousness case. According to MPEP § 2143, the Examiner must show that there is "some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings."

In the present case, there is no suggestion or motivation to replace Stumpf's belt-drive transmission with Hurn's gear transmission and motor arrangement. Admittedly, Stumpf can be modified with the teachings of Hurn to obtain the present invention. However, "[t]he mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." MPEP § 2143.01 (*citing In*

re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)). In other words, the Examiner cannot just explain that Stumpf can be combined with Hurn to obtain a certain result. Instead, the Examiner must explain why Stumpf and Hurn suggest "the desirability of the combination."

Because the Examiner has not pointed out why a person of ordinary skill in the art would modify Stumpf to obtain the present invention, the Examiner has failed to show a suggestion or motivation to combine Stumpf with Hurn. Accordingly, the Examiner has not met his *prima facie* burden. Thus, the Board should reverse this rejection.

B. Claims 2-3, 17-18, 20-22 and 27-28 are Patentable under 35 USC § 103 over Stumpf in view of Avakian.

The Board should reverse the Examiner's improper final rejection of Claims 2-3, 17-18, 20-22 and 27-28 under 35 USC § 103 based on the combination of Stumpf and Avakian. This is because, even if the two references were combined, such combination would not result in the claimed invention. Therefore, the Examiner's rejection was improper and should be reversed.

As admitted by the Examiner, Stumpf does not teach (a) the gear assembly and (b) the motor orientated substantially perpendicular to the arbor, as called for in Claims 2-3 and 27-28. Such features are not disclosed, taught or suggested in Avakian. Accordingly, even if Stumpf and Avakian were to be combined, such combination would not result in the claimed invention.

However, for an obviousness rejection to be proper, "all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Since the Stumpf/Avakian combination does not teach or suggest all the claim limitations, Claims 2-3, 17-18, 20-22 and 27-28 cannot be rejected based on the combination of Stumpf and Avakian. Therefore, the Board should reverse this improper rejection.

As to independent Claim 17 and its dependent claims, Stumpf does not disclose (a) the motor orientated substantially perpendicular to the arbor, and (b) a jack shaft for transmitting rotational energy from the motor to the arbor, as called for in the claims. As discussed above, the motor orientation is not disclosed, taught or suggested in Avakian. Accordingly, even if Stumpf and Avakian were to be combined, such combination would not result in the claimed invention.

Furthermore, while Avakian does disclose a jack shaft having a first end with a helical gear and a second end with a bevel gear, it does not disclose such jackshaft for transferring the rotational energy from the motor to the arbor. This is because the cutting disc 110 is directly driven by an air motor 106, without any intervening gears. Avakian, col. 2, lns. 46-50. Instead the jack shaft is used in a complicated gear box for driving a cam shaft 78, which ultimately upwardly moves the motor during the cutting operation, something that is not used in the miter saw field.

Accordingly, Avakian teaches away from using gears to drive a blade. Instead, it teaches a direct connection between the motor and blade. Thus, contrary to the Examiner's arguments, a person skilled in the art would not use the Avakian jack shaft "for the purpose of transferring rotational motion generated by the motor... to the arbor." Therefore, the Board should reverse this rejection.

C. Claims 5, 19 and 25 are Patentable under 35 USC § 103 over Stumpf in view of Avakian and Hollinger.

The Board should reverse the Examiner's improper final rejection of Claims 5, 19 and 25 under 35 USC § 103 based on the combination of Stumpf, Avakian and Hollinger. This is because, even if the three references were combined, such combination would not result in the claimed invention. Therefore, the Examiner's rejection was improper and should be reversed.

As admitted by the Examiner, Stumpf does not teach (a) the gear assembly and (b) the motor orientated substantially perpendicular to the arbor, as called for in Claims 5 and 25. Such features are not disclosed, taught or suggested in Avakian or Hollinger. Accordingly, even if Stumpf, Avakian and Hollinger were to be combined, such combination would not result in the claimed invention.

However, for an obviousness rejection to be proper, "all the claim limitations must be taught or suggested by the prior art." *Royka*, 490 F.2d 981. Since the Stumpf/Avakian/Hollinger combination does not teach or suggest all the claim limitations, Claims 5 and 25 cannot be rejected based on the combination of Stumpf, Avakian and Hollinger. Therefore, the Board should reverse this improper rejection.

As to Claim 19, Stumpf does not disclose (a) the motor orientated substantially perpendicular to the arbor, and (b) a jack shaft for transmitting rotational energy from the motor to the arbor, as called for in the claims. Neither does Avakian or Hollinger. Accordingly, even if Stumpf, Avakian and Hollinger were to be combined, such combination would not result in the claimed invention.

However, for an obviousness rejection to be proper, "all the claim limitations must be taught or suggested by the prior art." *Royka*, 490 F.2d 981. Since the Stumpf/Avakian/Hollinger combination does not teach or suggest all the claim limitations, Claim 19 cannot be rejected based on the combination of Stumpf, Avakian and Hollinger. Therefore, the Board should reverse this improper rejection.

D. Claim 24 is Patentable under 35 USC § 103 over Stumpf, Avakian in view of Burrows.

The Board should reverse the Examiner's improper final rejection of Claim 24 under 35 USC § 103 based on the combination of Stumpf, Avakian and Burrows. This is because, even if the three references were combined, such combination would not result in the claimed invention. Therefore, the Examiner's rejection was improper and should be reversed.

As admitted by the Examiner, Stumpf does not teach "the use of a gear assembly and a motor orientated substantially perpendicular to the miter saw." Such feature is not disclosed, taught or suggested in Avakian or Burrows. Accordingly, even if Stumpf, Avakian and Burrows were to be combined, such combination would not result in the claimed invention.

However, for an obviousness rejection to be proper, "all the claim limitations must be taught or suggested by the prior art." *Royka*, 490 F.2d 981. Since the Stumpf/Avakian/Burrows combination does not teach or suggest all the claim limitations, Claim 24 cannot be rejected based on the combination of Stumpf/Avakian and Burrows. Therefore, the Board should reverse this improper rejection.

IX. APPENDICES

Applicants/Appellant have attached three appendices. In particular, Appendix A contains a copy of the claims involved in the appeal. In addition, Applicants/Appellant have attached an Evidence Appendix and a Related Proceeding Appendix.

X. CONCLUSION

Based on the foregoing, Applicants/Appellant urge the Board to rule that Claims 1-7 and 17-30 are patentable.

Respectfully submitted,

Adan Ayala
PTO Reg. No. 38,373
Attorney for Applicants/Appellant

Appendices attached

APPENDIX A

CLAIMS INVOLVED IN APPEAL

Claim 1 (original): A miter saw, comprising:

a base having a support surface for at least partially supporting a workpiece;

a workpiece positioning fence coupled to the base, said positioning fence being orientated substantially perpendicular to the support surface; and

a cutting assembly pivotally mounted on the miter saw to achieve a plurality of positions, said cutting assembly including:

a motor orientated substantially perpendicular to an arbor for rotating a circular saw blade; and

a gear assembly configured and arranged to transfer the rotational energy of the motor to the arbor,

wherein the gear assembly and motor are configured so as to not contact the workpiece position fence when the cutting assembly is disposed at the cutting assembly's closest position to the base when mitering at least a 45° (forty-five degree) from a plane substantially perpendicular to the workpiece positioning fence.

Claim 2 (original): The miter saw of claim 1, wherein the gear assembly includes a helical gear set coupled to the motor and a bevel gear set between the helical gear set and the arbor.

Claim 3 (original): The miter saw of claim 1, wherein the gear assembly includes a helical gear set coupled to the motor and a jack shaft extending between the helical gear set and a bevel gear set coupled to the arbor.

Claim 4 (original): The miter saw of claim 1, further comprising a gear box for enclosing the

gear assembly, said gear box being tapered in the direction of the base.

Claim 5 (original): The miter saw of claim 1, further comprising a trunnion disposed between the cutting assembly and the base, said trunnion being constructed so as to permit the cutting assembly to bevel with respect to the base.

Claim 6 (original): The miter saw of claim 1, further comprising a turntable pivotally mounted to the base, said turntable being constructed so as to rotate the cutting assembly with respect to the workpiece positioning fence.

Claim 7 (original): The miter saw of claim 1, wherein the miter saw is at least one of a chop-type miter saw and a sliding miter saw.

Claim 17 (original): A saw, comprising:

a base having a support surface for at least partially supporting a workpiece;

a workpiece positioning fence coupled to the base, said positioning fence being orientated substantially perpendicular to the support surface; and

a cutting assembly pivotally mounted on the saw to achieve a plurality of positions, said cutting assembly including:

a motor orientated substantially perpendicular to an arbor for rotating a circular saw blade; and

a jack shaft having a first end with a helical gear and a second end having a bevel gear, said jack shaft being configured to transfer the rotational energy from the motor to the arbor,

wherein the arbor includes a bevel gear for mechanically coupling with the bevel gear included on the jack shaft.

Claim 18 (original): The saw of claim 17, further comprising a turntable coupled to the base, said turntable being configured to adjust the angular orientation of the saw blade with respect to a positioning fence.

Claim 19 (original): The saw of claim 17, further comprising a trunnion disposed between the support and the saw base for beveling the saw blade with respect to the support surface.

Claim 20 (original): The saw of claim 17, wherein the cutting assembly pivot point is further away from the base than the center of rotation of the saw blade when the mounting arm is parallel to the base.

Claim 21 (original): The saw of claim 17, wherein the saw is at least one of a chop saw, a chop-type miter saw, a sliding miter saw, and a beveling miter saw.

Claim 22 (original): The saw of claim 17, further comprising a gear box coupling the motor and the saw blade, wherein the gear box is tapered in the direction of the base.

Claim 23 (original): The saw of claim 22, further comprising a flange for securing the circular saw blade to the arbor, wherein the gear box terminates adjacent the flange.

Claim 24 (original): A miter saw, comprising:

a base having a support surface for at least partially supporting a workpiece;

a workpiece positioning fence coupled to the base, said positioning fence being orientated substantially perpendicular to the support surface;

a turntable pivotally mounted to the base, said turntable being constructed so as to rotate with respect to the workpiece positioning fence; and

a cutting assembly pivotally mounted to the turntable so as to achieve a plurality of positions, said cutting assembly including:

a motor orientated substantially perpendicular to an arbor for rotating a circular saw blade; and

a gear assembly configured and arranged to transfer the rotational energy of the motor to the arbor,

wherein the gear assembly and motor are configured so as to not contact the workpiece position fence when the cutting assembly is disposed at the cutting assembly's closest position to the base when mitering at 45° (forty-five degrees) from a plane substantially perpendicular to the workpiece positioning fence.

Claim 25 (original): The miter saw of claim 24, further comprising a trunnion disposed between the cutting assembly and the turntable, said trunnion being constructed so as to permit the cutting assembly to bevel with respect to the base.

Claim 26 (original): The miter saw of claim 24, wherein the periphery of the saw blade is substantially equal to the interface between the support surface and the positioning fence, on the workpiece positioning side, when the cutting assembly is disposed in a full-cut position.

Claim 27 (original): The miter saw of claim 24, wherein the gear assembly includes a helical gear set coupled to the motor and a bevel gear set between the helical gear set and the arbor.

Claim 28 (original): The miter saw of claim 24, wherein the gear assembly includes a helical gear set coupled to the motor and a jack shaft extending between the helical gear set and a bevel gear set coupled to the arbor.

Claim 29 (original): The miter saw of claim 24, further comprising a gear box coupling the motor and the circular saw blade, wherein the gear box is tapered in the direction of the base.

Claim 30 (original): The miter saw of claim 24, wherein the cutting assembly pivot point is

further away from the base than the center of rotation of the circular saw blade when the mounting arm is parallel to the base.

EVIDENCE APPENDIX

No Evidence is being submitted under 37 CFR §§ 1.130-1.132 or previously entered by the Examiner.

RELATED PROCEEDINGS APPENDIX

There are no currently pending appeals, interferences, or judicial proceedings related to the present case. No Board decisions or court decisions have issued in the previous related cases.